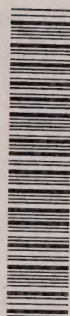


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Ontario Energy Board



IN THE MATTER OF THE
ONTARIO ENERGY BOARD ACT

AND

IN THE MATTER OF AN APPLICATION BY

UNION GAS LIMITED

**FOR DESIGNATION OF THE
EDYS MILLS POOL**

E.B.O. 174

**REPORT OF THE BOARD TO
THE LIEUTENANT GOVERNOR
IN COUNCIL**

OCTOBER 7, 1992

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avec la Commission de l'énergie de l'Ontario.

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(La Commission accepte les appels

à frais virés.)



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October 7, 1992

TO HIS HONOUR THE LIEUTENANT GOVERNOR IN COUNCIL:

The Ontario Energy Board received an Application from Union Gas Limited, pursuant to Section 35(2) of the Ontario Energy Board Act, seeking a regulation under Section 35(1) of the said Act which would designate as a gas storage area, certain lands overlaying and surrounding the Edys Mills Pool in the Township of Dawn, in the County of Lambton, Ontario.

The Board held a public hearing on this matter and has examined all the evidence and submissions of the Applicant and other parties to that hearing. The Board now herewith submits its Report and Recommendation.


Respectfully Submitted,

Pamela Chapple
Presiding Member

C.W.W. Darling
Member

E.J. Robertson
Member





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OCTOBER 7, 1992

E.B.O. 174

IN THE MATTER OF the Ontario Energy Board Act,
R.S.O. 1990, c. O 13, and in particular Sections 35(1)(g)
and 35(2) thereof;

AND IN THE MATTER OF an Application by Union
Gas Limited for a Regulation designating the area known
as the Edys Mills Pool, in the Township of Dawn in the
County of Lambton, as a gas storage area.

BEFORE: Pamela Chapple
Presiding Member

C. W. W. Darling
Member

E. J. Robertson
Member

**REPORT OF THE BOARD TO THE LIEUTENANT
GOVERNOR IN COUNCIL**

October 7, 1992

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1. THE APPLICATIONS

**1.1 THE APPLICATION FOR DESIGNATION OF THE
 EDYS MILLS POOL**

1.1.1 By Application dated March 16, 1992, Union Gas Limited ("Union", "the Company" or "the Applicant") applied to the Ontario Energy Board ("the Board"), pursuant to Section 35 of the Ontario Energy Board Act ("the Act"), for a regulation designating, as a gas storage area ("the designated gas storage area"), certain lands overlaying the Edys Mills Pool ("the pool" or "the Edys Mills Pool"), located in Lots 31, 32 and 33, Concession VIII, and Lots 32 and 33, Concession IX in the Township of Dawn in the County of Lambton.

1.1.2 A map showing the location of the lands which are recommended by the Board for designation is attached as Appendix "A".

1.1.3 This Application ("the Designation Application") was assigned Board File No. E.B.O. 174.

1.2 THE COMPANION APPLICATIONS AND THE REFERENCE

1.2.1 In addition to the Designation Application, the Company filed a series of applications (collectively "the Applications") for the following:

- pursuant to Section 21 of the Act, an order of the Board authorizing the Company to inject gas into, store gas in and remove gas from the Edys Mills Pool, and to enter into and upon the lands for such purposes ("the Authorization Application"). This application was also assigned Board File No. E.B.O. 174;
- pursuant to Sections 46 and 48 of the Act, an order or orders of the Board granting leave to construct several storage gathering pipelines ("the gathering lines") in Lots 32 and 33, Concession VIII, and 0.59 km. of NPS 12 transmission pipeline ("the transmission line") in Lot 33, Concession VIII within the proposed designated storage area of the Edys Mills Pool, together with compression and measurement facilities ("the compressor station") all on or within the proposed designated storage area ("the Leave to Construct Applications"). These applications were assigned Board File No. E.B.L.O. 243.

1.2.2 The Company also applied to the Minister of Natural Resources for Permits to Drill three injection/withdrawal wells within the proposed designated storage area of the Edys Mills Pool. This matter was referred to the Board by the Minister of Natural Resources in a Letter of Reference dated June 3, 1992 ("the Reference") pursuant to Section 23(1) of the Act. This matter was assigned Board File No. E.B.R.M. 103.

2. THE HEARING

2.0.1 As required under Sections 35(2), 23(1), 46, and 48 of the Act, and following the publication and service of the required notices, the Board heard evidence related to the Designation Application, the Applications and the Reference on September 22 and 23, 1992 in Sarnia, Ontario. Oral argument was heard on September 24.

2.0.2 The following parties appeared at the hearing:

Douglas Sulman	For Union
Jennifer Lea	For Board Staff
F. J. Tricker	For Tecumseh Gas Storage Limited ("Tecumseh")
C. McMurphy	On His Own Behalf
W. Lang	On Behalf of M. Snopko, E. & L. Knight and W. & L. McGuire

2.0.3 The Company called the following employees as witnesses:

James Gordon Egden	Manager, Geology
William Charles Fay	Manager, Storage Planning

Ian Malpass	Supervisor, Financial Studies
William Killeen	Manager, Gas Supply Planning
Ralph Edward Mayer	Project Manager, Pipeline Engineering
Larry Ross Hyatt	Manager, Transmission Planning
John P. Hayes	Manager, Reservoir Services
William T. Wachsmuth	Environmental Planner, Pipeline Engineering
Bradley William French	Coordinator, Storage and Natural Gas Leases
David Robert Lowe	Manager, Storage Administration

2.0.4 Board Staff called Ian Moncrieff, President, and Senior Environmental Planner, Consolidated Environmental Group Ltd.

2.0.5 At the conclusion of oral argument on September 24 the Board gave oral decisions on the Designation Application, the Applications and the Reference. It reserved its decisions on costs and on the conditions to be imposed on any authorization, leave or recommendation resulting from the Board's approvals of the foregoing. The Board's decisions on these matters will be included in the Board's Reasons for Decision on the Applications and Report to the Minister of Natural Resources on the Reference which will be issued as soon as possible.

2.0.6 The Board stated as follows:

In the matter of Union's application for a regulation designating the Edys Mills pool as a gas storage area, the Board will

recommend to the Lieutenant Governor in Council that the pool be so designated.

In the matter of Union's application for leave to construct pipelines related to the storage operation, conditional upon the enactment of the necessary regulation designating the pool as a gas storage area, the Board finds that it is in the public interest to approve the construction of the pipelines as applied for.

In the matter of Union's application to the Minister of Natural Resources for permits to drill wells in the proposed storage area, the Board will recommend to the Minister that the applied-for permits be issued subject to the necessary regulation being enacted designating the pool as a gas storage area.

In the matter of Union's application for authority to inject, store and remove gas in and from the pool, the Board authorizes Union to do so conditional upon the enactment of the required regulation and the issuance of the drilling permits by the Minister of Natural Resources.

The Board will reserve its decision on the conditions to be applied to the approvals and recommendations, and all of these approvals and recommendations will be conditional upon Union complying with the conditions.

The Board will also reserve its decision on costs.

- 2.0.7 A complete transcript of the proceedings, together with all exhibits, is available for public inspection at the Board's offices in Toronto.
- 2.0.8 Although the Board has considered all the evidence and submissions presented at the hearing, this Report summarizes only those portions which the Board has considered necessary to support the conclusions contained herein with respect to the Designation Application.

REPORT OF THE BOARD

3. THE PROPOSED DESIGNATED STORAGE AREA

- 3.0.1 The area that Union proposed to be designated as a gas storage area is comprised of 374 hectares in respect of which Ram Petroleum Limited ("Ram") has assigned to Union all of its petroleum and natural gas leases ("the petroleum and natural gas leases") and storage rights ("the gas storage leases") (collectively "the leases"). Ram had obtained these leases from 11 landowners.
- 3.0.2 Ram has extracted oil and natural gas from the pool and, pursuant to an agreement with Union, it will continue to extract oil from the pool through one well.
- 3.0.3 Within the proposed boundaries of the designated storage area Union identified two reefs; the west reef was identified as suitable for the storage of natural gas, and the east reef was identified as water filled and therefore not available for natural gas storage. Union submitted that, while there was not any firm evidence that there was communication between the two reefs, geological review suggested that there could be. If that were the case, there is also a possibility that gas could migrate from the west reef to the east reef. Therefore in order to protect the proposed storage operations Union included the east reef in its Designation Application.

- 3.0.4 The proposed designated storage area includes the boundaries of the reefs as determined by well records and three dimensional seismic analysis, plus a 40 to 60 metre buffer zone as recommended by Board Staff in previous hearings. Certain drilling tracts were included, not for geological reasons, but by virtue of the fact that they were encompassed by the leases ("the additional drilling tracts"). These additional drilling tracts are located in Lots 31, 32 and 33, Concession VIII.
- 3.0.5 Union has purchased from Ram the 72,913 10^3m^3 of natural gas remaining in the pool. A portion of that gas, estimated at 23,700 10^3m^3 will be used as cushion gas for the pool at a pressure of 2100 K Paa. Once fully developed to a pressure gradient of 15.8 kPa/m, the pool is projected to provide 58,500 10^3m^3 of storage working capacity and will be operated as a base load pool; gas will be withdrawn continuously between November and April.
- 3.0.6 Union proposed using five existing wells, two of which would require modification, and drilling three new wells, two injection/withdrawal and one observation, for the purposes of its storage operations.

4. POSITIONS OF THE PARTIES

4.1 NEED

4.1.1 Union claimed that as a result of the development of the pool Union's customers will enjoy gas cost savings and an increased security of supply. It was also its evidence that the additional storage capacity was necessary in order for it to meet the demands of its in-franchise end users and M12 external transportation customers in its fiscal 1994 year.

4.1.2 Board Staff accepted Union's evidence that it will require the additional storage to meet its demands by the winter of 1993/94.

4.2 SUITABILITY

4.2.1 Board Staff agreed with the Company's geological assessment that the Edys Mills Pool formation is a suitable vessel for use as a gas storage pool.

4.3 BOUNDARIES

4.3.1 Board Staff initially submitted that the boundaries of designated storage areas should only be set on the basis of geological factors and not on the basis of factors such as lease requirements. Therefore, they rejected Union's submission that the additional drilling tracts should be included merely by virtue of the fact that they formed part of the land encompassed by the leases. The additional drilling tracts in question are shown on Appendix A.

4.3.2 However, Board Staff noted that the leases provide that, if any of the land included in the leases is relinquished, Union would be required to surrender all of the leases; that the additional drilling tracts are adjacent to the primary storage area, the west reef; and that in the past Union has had to reapply to the Board for a recommendation extending the boundaries of a designated storage area when it was found that a producing gas well outside of the designated storage area was in communication with the designated storage area. For these reasons, and on the basis of the fact that the geological evidence did not show that the inclusion of the additional drilling tracts was excessive, Board Staff, in the event, concurred that the proposed boundaries would effectively delineate and protect the Edys Mills Pool.

4.4 THE LANDOWNERS

4.4.1 None of the landowners opposed the designation of the Edys Mills Pool as a gas storage area.

5. THE BOARD'S FINDINGS

- 5.0.1 The Board notes that all parties supported the designation of the Edys Mills Pool. The Board concurs with the conclusions that there is need for the pool and that its geology is suitable for use as a gas storage reservoir. The Board, therefore, finds that it is in the public interest that the pool should be designated and utilized to provide increased storage capacity for the benefit of natural gas consumers in Ontario.
- 5.0.2 The Board accepts that, given the data available, it is appropriate to include the east reef in the designated storage area. It also accepts that the proposed 40 to 60 metre buffer zone surrounding the areal extent of the reefs is appropriate.
- 5.0.3 With respect to the inclusion of the additional drilling tracts the Board has some concern about Union's position that it was appropriate to include them simply on the basis of "administrative convenience", that is by virtue of a provision in the leases. The Board, as it stated in E.B.O. 172, agrees that the inclusion of some or all of a landowner's property in a designated storage area is a factor to be considered in setting the boundaries of a storage area. However, it cannot accept that land should be included in a designated storage area simply because a lease provides that if the lease is surrendered with respect to those lands, all of the lands subject to the lease must be surrendered. In this regard it is noted that the leases were

entered into by Ram without the benefit of geological evidence as to the extent of the potential storage area, that Ram is not in the business of developing storage areas and that Ram subsequently assigned the leases to Union.

5.0.4 The Board notes the evidence that Union holds the drilling rights to the additional drilling tracts and therefore, if they are included within the boundaries of the proposed designated storage area, it will not impact on the drilling rights of third parties.

5.0.5 The Board also notes that the additional drilling tracts are adjacent to the primary storage area, the west reef, and the Board accepts Board Staff's submission that the inclusion of these tracts provides additional protection for the storage area and that the geological evidence does not show that the inclusion of the additional drilling tracts is excessive.

5.0.6 The Board therefore finds that the proposed boundaries of the designated storage area are appropriate.

6. RECOMMENDATIONS

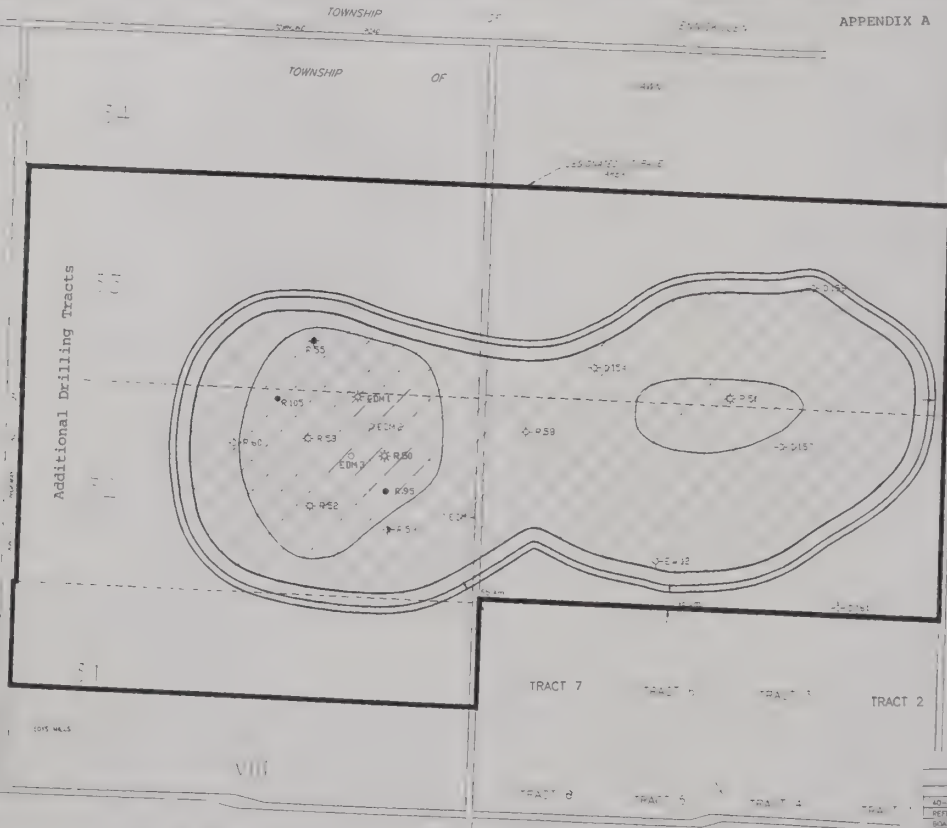
6.0.1 Based on the evidence and submissions presented in the hearing, and the Board's findings contained herein, the Board respectfully recommends to the Lieutenant Governor in Council as follows:

1. that the Edys Mills Pool be designated as a natural gas storage area, and that Regulation 700 under the Ontario Energy Board Act be amended to reflect such designation; and
2. that the Metes and Bounds of said designated natural gas storage area should be defined as set forth in Appendix "B" attached hereto.

APPENDIX A

**MAP OF THE EDYS MILLS
DESIGNATED STORAGE AREA**

APPENDIX A - Boundary of the
Edys Mills Designated
Storage Area



LEGEND

- ⊕ GAS PRODUCER
- ⊕ GAS SHOW, ABANDONED
- OIL PRODUCER
- ⊕ OIL PRODUCER, GAS PRODUCER
- ⊕ OIL SHOW, GAS SHOW, ABANDONED
- ⊕ GAS SHOW, SUSPENDED
- ⊕ DRY HOLE, ABANDONED
- PROPOSED LOCATION
- NDE NOT DEEP ENOUGH
- ABS ABSENT



AREA REQUIRED TO
PROTECT PROPOSED
STORAGE OPERATIONS



AREA, EXTENT OF
WEST RESERVOIR &
EAST RESERVOIR



40-60 METRE BUFFER
ZONE FROM OUTER
EDGE OF POTENTIALLY
GAS FILL. A
SUFFICIENTLY LARGE
AREALITY, SEE REMARKS



FORMS	
40-60 METRE "BUFFER ZONE" AS	
REFERENCED IN "REPORT OF THE	
BOARD" pg. 10, pg. 13, E.B.O. 112	
OCTOBER 1991	
TRACT LINES WERE APPROXIMATE	
EDYS MILLS	
DEVELOPMENT AREA	
AREA REQUIRED TO PROTECT	
PROPOSED STORAGE OPERATIONS	
DATE: 10/27/91	BY: [Signature]
SCALE: 1:10,000	DATE: 10/27/91

APPENDIX B

**METES AND BOUNDS DESCRIPTION
OF THE EDYS MILLS POOL**

All and Singular that certain parcel or tract of land and premised situate, lying and being in the Township of Dawn, in the County of Lambton and in the Province of Ontario and being composed of North Half of Lot 31, Concession 8, West Half of Lot 32, Concession 8, all of Lots 81 to 122 inclusive, Registered Plan No. 2, being Subdivision Lot 33, Concession 8, all of Lots 1 to 20 inclusive, Registered Plan No. 5, being East Half of Subdivision Lot 32, Concession 8, all of Lots 32 and 33, Concession 9, and part of the Road Allowance between Concessions 8 and 9, which parcel may be more particularly described as follows:

Commencing at a point being the northwest corner of Lot 81, Registered Plan No. 2, being part of subdivision Lot 33, Concession 8 of the Township of Dawn;

Thence Easterly (parallel to the Road Allowance between the Townships of Dawn and Enniskillen) along the Northerly Lot Lines of Lots 81 to 94 inclusive of Registered Plan No. 2 of Subdivision lot 33, Concession 8 of the Township of Dawn a distance of 1359.277 meters more or less to a point (this point being the Westerly Limit of the Road Allowance between Concessions 8 and 9);

Thence Easterly (parallel to the Road Allowance between the Townships of Dawn and Enniskillen) a distance of 20.10 meters more or less to a point (this point being the Easterly limit of the Road Allowance between Concessions 8 and 9);

Thence Easterly (parallel to the Road Allowance between the Townships of Dawn and Enniskillen) along the Northerly Lot Line of Lot 33, Concession 9, of the Township of Dawn at a distance of 1362.855 meters more or less to a point (this point being the Westerly limit of the Road Allowance between Concessions 9 and 10);

Thence Southerly (parallel to the Westerly limit of the Road Allowance between Concessions 9 and 10) along the Easterly Lot Line of Lot 33, Concession 9 a distance of 626.345 meters more or less to a point (this point being the Lot Line between Lots 33 and 32 Concession 9 of the Township of Dawn);

Thence Southerly (parallel to the Westerly limit of the road Allowance between Concessions 9 and 10) along the Easterly Lot Line of Lot 32, Concession 9, a distance of 607.702 meters more or less to a point (this point being the Lot Line between Lots 32 and 31 Concession 9 of the Township of Dawn);

Thence Westerly (parallel to the Road Allowance between Lots 31 and 30) along the Southerly Lot Line of Lots 32 and 33, Concession 9 a distance of 1368.159 meters more or less to a point (this point being the Westerly lot line of Lot 31, Concession 9);

Thence Southerly (parallel to the Easterly Limit of the Road Allowance between Concessions 9 and 8) a distance of 293.377 meters more or less to a point;

Thence Westerly (parallel to the Road Allowance between Lots 31 and 30) a distance of 20.10 meters more or less to a point (this point being the Westerly Limit of the Road Allowance between Concessions 8 and 9);

Thence Westerly (parallel to the Road Allowance between Lots 31 and 30) along the Half Lot Line between the Northerly and Southerly Halves of Lot

31, Concession 8 a distance of 1366.165 meters more or less to a point (this point being the Westerly limit of Lot 31, Concession 8 of the Township of Dawn);

Thence Northerly (parallel to the Easterly limit of King's Highway No. 21) along the Westerly limit of Lot 31, Concession 8 of the Township of Dawn a distance of 310.307 meters more or less to a point (this point being the Lot Line between Lots 31 and 32, Concession 8 of the Township of Dawn);

Thence Easterly (parallel to the Road Allowance between Lots 31 and 30) along the Lot Line between Lots 31 and 32 Concession 8 of the Township of Dawn a distance of 9.217 meters more or less to a point;

Thence Northerly (parallel to the Easterly limit of King's Highway No. 21) along the Westerly limit of Lot 32, Concession 8 of the township of Dawn a distance of 608.494 meters more or less to a point (this pont being the Northwest Corner of Lot 32, Concession 8 and the southwest corner of Lot 109 of Registered Plan No. 2 of Subdivision Lot 33, Concession 8 of the Township of Dawn);

Thence Northerly (parallel to the Easterly limit of King's Highway No. 21) along the Westerly Lot Lines of Lots 109, 108 and 81 of Registered Plan No. 2 of Subdivision Lot 33, Concession 8 of the Township of Dawn a distance of 632.005 meters more or less to a point (this point being the Northwesterly limit of Lot 81, Registered Plan No. 2, Subdivision Lot 33, Concession 8 of the Township of Dawn) being the point of commencement.

